

REMARKS

Claims 1-4, 6-11, 13-18, and 20-28 are pending, claims 7, 12, 19, and 29 having previously been canceled. The “final” Office Action allowed claims 22-28 and rejected the remaining claims. More particularly, the Office Action rejected:

- claims 8-11 and 13-14 under 35 U.S.C. §101 as directed to non-statutory subject matter;
- claims 8-11 and 13-14 as indefinite under 35 U.S.C. §112, ¶2;
- claims 1, 4, 6-11, 13-15, 18, and 20-21 as obvious under 35 U.S.C. §103(a) over U.S. Letters Patent 6,148,322 (“Sand *et al.*”); and
- claims 2-3 and 16-17 as obvious under 35 U.S.C. §103(a) over Sand *et al.* combined with U.S. Letters Patent 5,012,409 (“Fletcher”).

Applicant traverses the rejections.

I. CLAIMS 8-11 ARE DIRECTED TO STATUTORY SUBJECT MATTER

The Office rejected claims 8-11 and 13-14 under 35 U.S.C. §101 as directed to non-statutory subject matter. The Office’s position appears to rest on three suppositions:

- the claims are directed software without reciting hardware;
- there is no specific and asserted utility; and
- there is no established utility.

Applicant respectfully submits that each of these suppositions is wrong.

The Office states that software *per se* is non-statutory. This is an incorrect statement of the law. There is no *per se* ban on patenting software under United States jurisprudence. Notably, the Office has failed to produce any authority for this proposition. Thus, the fact that the claims “[appear] to be comprised of software alone without claiming associated computer

hardware required for execution...” is of no consequence in the analysis under 35 U.S.C. §101. Should the Office maintain to the contrary, Applicant requests that the Office cite the *legal* authority for such a proposition.

However, Applicant respectfully submits that the Office’s observation that the claims are directed solely to software is incorrect. The preambles clearly recite that the claims are for a “computing apparatus.” It is well established the recitations in the preamble of a claim can limit its scope and the test is whether they “breathe life and meaning” into the claims. *In re Higbee*, 527 F.2d 1405, 1407 (C.C.P.A. 1976); *Kropa v. Robie*, 187 F.2d 150, 151-52 (C.C.P.A. 1951). Applicants respectfully submit that the recitation of a “computing apparatus” necessarily “breathes life and meaning” into the claims if the claims are rendered non-statutory by its omission. Thus, the claims are not directed to software, but rather to a programmed computing apparatus.

Nevertheless, regardless of whether the claims are directed software or hardware, there is a specific and asserted utility and a well established utility. The “Summary of the Invention” clearly states that the invention is in one aspect a method and in a second aspect an apparatus for failure recovery. (p. 8, lines 1-15) The specification also notes that:

...modern computer systems are becoming more and more robust than their predecessors. Computer systems today process a fairly large number of tasks at any given time. As the number of tasks that are processed increases, the likelihood that some of these tasks may not successful complete (because of errors, for example) also increases. Errant or hung tasks, for example, may adversely affect the performance of the computer system. As such, recovery from these failed tasks is desirable.

Thus, Applicant has clearly asserted a specific utility—*i.e.*, failure recovery in the event of a failed task within a computing environment.

The Office also posits that failure recovery is not “well-established.” However, the Office’s actions in this examination refute this position, since it has managed to cite seven references it claims are on point. Still further, each of these references cites several references as well. The primary reference in this case, one that the Office alleges teaches essentially everything Applicant is trying to claim, happens to cite 18 references. There appears to be no shortage of art that the Office feels is relevant to failure recovery. The evidence of record produced by the Office therefore eviscerates the Office’s position regarding the asserted utility. Should the Office maintain its position on this point, Applicant requests clarification resolving the discrepancy between the evidence of record and the Office’s position contrary to that art.

Applicant notes that the Office has historically, for quite some time now, allowed claims such as claims 8-11 and 13-14. This impliedly means that Office policy for a number of years now has been that such claims are directed to statutory subject matter. A reversal of this policy, particularly as extreme as is presented in this case, without a concomitant change in law by Congress or the federal courts, constitutes an arbitrary and capricious act. Accordingly, such an act is reversible as a matter of law under even the highest standards of review in the federal courts.

The Office’s rejection of claims 8-11 and 13-14 under 35 U.S.C. §101 as directed to non-statutory subject matter is therefore contrary to both law and the evidence of record. Applicant respectfully submits that attempts at the clarification requested above will highlight the error in the Office’s position. Accordingly, Applicant requests that the rejections be withdrawn.

II. CLAIMS 8-11 AND 13-14 ARE DEFINITE

The Office also rejected again claims 8-11 and 13-14 as indefinite under 35 U.S.C. §112, ¶2. The “final” Office Action states that “[t]he claim language in the following claims is not

clearly understood”. (p.3, ¶ 7.a.) Applicant notes that whether the Office understands the claim language is irrelevant to the applicable legal analysis. All that is necessary is that the language be sufficiently definite that those skilled in the art can ascertain its scope. *Orthokinetics Inc. v. Safety Travel Chairs Inc.*, 1 U.S.P.Q.2d (BNA) 1081, 1088 (Fed. Cir. 1986); *Shatterproof Glass Corp. v. Libbey Owens Ford Co.*, 225 U.S.P.Q. (BNA) 634, 641 (C.C.P.A. 1985). However, the Office has failed even to allege the necessary factual predicate—that those skilled in the art would be unable to ascertain the scope of the language—much less provide any reasoning as to why that is the case. Applicant requests clarification as to the application of the legal principle for this rejection.

Applicant has nevertheless amended claim 8 yet again to impart further clarity in order to resolve this issue. Applicant notes that the Office’s treatment of the claims for examination purposes demonstrates that the Office does, in fact, comprehend the claims’ scope. Applicant respectfully submits that the claim language is surely now definite. Should the Office maintain its position that the language is still indefinite, Applicant requests more than a blanket statement to that affect. Applicant requests that an explanation of how the claim language is indefinite be given.

III. CLAIMS 1, 4, 6-11, 13-15, 18, AND 20-21 ARE ALLOWABLE OVER SAND *ET AL.*

The Office rejected claims 1, 4, 6-11, 13-15, 18, and 20-21 as obvious under 35 U.S.C. §103(a) over U.S. Letters Patent 6,148,322 (“Sand *et al.*”). To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 706.02(j); *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Sand *et al.* fails to meet this standard.

**A. Sand *et al.* Fails to Disclose the Exit Routine Call
Recited in Claims 1, 4, 6-7, 15, 18, and 20-21**

Claims 1 and 15 recite that the exit routine for an incomplete task is called after a preselected time period. Applicant respectfully submits that the Office has misconstrued Sand *et al.* with respect to this limitation. The Office first cites the Abstract of Sand *et al.*, which reads:

The present invention provides a processing unit with an improved ability to coordinate the execution of multiple tasks with varying priorities. Tasks to be executed are assigned both a request condition and a terminating condition, with the processing unit initiating execution of the task with the highest priority whose request condition is satisfied. In general, *the processing unit terminates an executing task once the terminating condition of that task is satisfied*, and then initiates execution of the next highest-priority task with a satisfied request condition. However, the processing unit may abort execution of a task (other than the highest-priority task) if the request condition of a higher-priority task becomes satisfied. Moreover, the processing unit ensures the highest-priority task does not monopolize system resources *by tracking the elapsed execution time and terminating the highest-priority task if this elapsed time exceeds a predetermined maximum*, in which case the processing unit initiates execution of the next highest priority task with a satisfied request condition.

(emphasis added). Thus, the Abstract does teach termination of a task that is hung-up, but it does not teach that this occurs through call and execution of an exit routine. The Office next relies on the following passage from the detailed description:

Processing of the higher-priority task continues until a predetermined maximum processing time elapses, at which time the task is aborted in favor of a task having a next highest priority for which the request condition is satisfied and the terminating condition is not satisfied. However, the highest-priority task can only be aborted based on the maximum time processing elapsing, and cannot be superseded by another highest-priority task (that is, another task also having the highest priority). In a variation of this embodiment, the maximum processing time may be set by the user to accommodate the particular requirements of a given system.

(col. 2, lines 16-27; emphasis added) This passage teaches that the hung-up task is terminated by aborting it and also fails to teach or suggest that the abort occurs through call and execution of an exit routine. Finally, the Office relies on the following passage:

Whenever the central processing unit 1 initiates execution of the high-priority task hpT, the timer module 9 begins tracking an elapsed execution time. *The central processing unit 1 will abort execution of the high-priority task hpT if this elapsed time exceeds a user-selected maximum processing time, regardless of whether the terminating condition of the high-priority task hpT has been satisfied.*

(col. 4, lines 41-47; emphasis added) Again, there is no teaching that an exit routine is called when the hung-up task is aborted.

Thus, Sand *et al.* nowhere teaches or suggests that an exit routine is called when a hung-up task is aborted. Although the Office does not say so, it may be that the Office is assuming that this teaching is inherent in the teachings it cites. However, inherency and obviousness are not synonymous since "[t]hat which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." *In re Newell*, 13 U.S.P.Q.2d (BNA) 1248, 1250 (Fed. Cir. 1989), quoting *In re Spormann*, 150 U.S.P.Q. (BNA) 449, 452 (C.C.P.A. 1966). "[O]ne cannot choose from the unknown." *In re Ochiai*, 37 U.S.P.Q.2d (BNA) 1127, 1131 (Fed. Cir. 1995), quoting *In re Mancy*, 182 U.S.P.Q. (BNA) 303, 306 (C.C.P.A. 1974). "Such a retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection." *In re Rijckaert*, 28 U.S.P.Q.2d (BNA) 1955, 1957 (Fed. Cir. 1993). The principle of inherency is therefore not available to the Office in establishing *prima facie* obviousness.

The Office therefore misconstrues Sand *et al.* with respect to this limitation of claims 1 and 15, which Sand *et al.* fails to teach or suggest. Claims 4, 6-7, 18, and 20-21 incorporate this limitation by virtue of their dependence from claim 8. 35 U.S.C. §112, ¶4. Sand *et al.* therefore

fails to render obvious any of claims 1, 4, 6-7, 15, 18, and 20-21 since it fails to teach or suggest each of the limitations of those claims. M.P.E.P. § 706.02(j); *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

**B. Sand *et al.* Fails to Disclose a “Task Picker”
Recited in Claims 8-11 and 13-14**

Claim 8 expressly recites several functions of the “task picker”, the accumulation of which basically means that the “task picker” controls the execution of tasks stored in the queue. For example, upon determining another task is stored in the queue, the task picker executes that task. The Office points to the teaching of the “cyclically repeated task” in Sand *et al.* as disclosing the “task picker” of Applicant’s invention. However, they are not the same thing. The “cyclically repeating task” serves the purpose of insuring that every so often, a specific communication function gets executed. More importantly, it has no role in selecting which task in the queue gets selected for execution. In essence, it is a periodic interrupt that calls a communication routine.

In alleging to the contrary, the Office cites: Figure 2; col. 3, lines 45-48; col. 3, lines 56-67; and col. 4, lines 1-7. Figure 2 merely “...illustrates the relative priorities of tasks executed by a programming unit....” (col. 3, lines 1-3) The first excerpt from the specification reads:

Each task is then assigned a respective priority. Examples of these tasks for an embodiment of the present invention are illustrated in FIG. 2, with the lowest priority task at the bottom of the list and the highest priority task at the top.

(col. 3, lines 45-48) Note that there is no mention of execution control among the task in the queue and describes in text no more than is shown in Figure 2. The second excerpt reads:

In the embodiment of FIG. 2, the task having the second-highest priority is the high-priority communications task hpKt. This task evaluates communications instructions received from the high-priority task hpT and determines whether the received

communications instructions are high-priority or low-priority. If the received communications instructions are high-priority, the high-priority task hpT processes the instructions itself; otherwise, the high-priority task hpT transfers the instructions to a low-priority communications task npKt for processing. The low-priority communications task npKt is assigned the lowest priority of all of the tasks.

(col. 3, lines 56-67) In this excerpt, the various tasks in the queue pass control among themselves depending on priority—that is, no one of them controls the execution of tasks within the queue. Furthermore, none of these tasks is the “cyclically repeating task”. The third excerpt reads:

Here, the high-priority communications task hpKt is implemented as an independent task, but it could also be designed as a submodule of the high-priority task hpT.

The second-lowest priority task is the so-called cyclically-repeated task zwT. This task will be continuously executed as long as no task having a higher priority is awaiting execution.

(col. 4, lines 1-7) Here, the “cyclically repeated task” and its execution are disclosed, but there is no teaching or suggestion that it exercises *any* kind of control over execution of tasks in the queue.

Accordingly, the Office misconstrues Sand *et al.*, which fails to disclose a “task picker” such as that recited in claim 8. Claims 9-11 and 13-14 incorporate this limitation by virtue of their dependence from claim 8. 35 U.S.C. §112, ¶4. Sand *et al.* therefore fails to render obvious any of claims 8-11 and 13-14 since it fails to teach or suggest each of the limitations of those claims. M.P.E.P. § 706.02(j); *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

IV. CLAIMS 2-3 AND 16-17 ARE ALLOWABLE OVER SAND *ET AL.* & FLETCHER

The Office rejected claims 2-3 and 16-17 as obvious under 35 U.S.C. §103(a) over Sand *et al.* combined with U.S. Letters Patent 5,012,409 (“Fletcher”). Claims 2-3 depend from claim

1 and claims 16-17 depend from claim 15. These claims incorporate limitations of their independent claims by virtue of their dependence. 35 U.S.C. §112, ¶4. These rejections rely Sand *et al.* to each all the limitations recited in the independent claims. As is established above, Sand *et al.* fails to do so. The combination of Sand *et al.* and Fletcher consequently fails to teach or suggest each of the limitations of those claims. Accordingly, Sand *et al.* in combination with Fletcher fails to render obvious any of claims 2-3 and 16-17. M.P.E.P. § 706.02(j); *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

V. CONCLUDING REMARKS

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. Applicants therefore request that the rejections be withdrawn and the claims allowed to issue.

The Examiner is invited to contact the undersigned at (713) 934-4053 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

Date: January 29, 2007

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